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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,410	02/04/2004	Hui-Huang Chang	BHT-3111-406	1914
7590 03/28/2007 BRUCE H. TROXELL 5205 LEESBURG PIKE, SUITE 1404 FALLS CHURCH, VA 22041			EXAMINER WANG, KENT F	
			ART UNIT	PAPER NUMBER
			2609	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/28/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/770,410	CHANG, HUI-HUANG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Kent Wang	2609	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/30/2006</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The reference listed on the disclosure statement (IDS) submitted on 06/30/2006 has been considered by the examiner (see attached PTO 1449).

### ***Drawings***

3. Figures 1A, 1B and 1C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 6, and 16-17 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lin, US 2004/0095469.

Regarding claim 1, Lin discloses an image capture apparatus comprises:

- an image capture unit (i.e. a sensor 58) to generate an image data (i.e. raw data 62) corresponding to an image (see [0017]);
- and a processing unit (i.e. a printer manager 70) coupled to the image capture unit to process the image data, wherein when the image capture apparatus is coupled to an imaging forming device, the processing unit is for actively outputting the processed image data to the imaging forming device (i.e. printer 40) (see [0018]).

Regarding claim 16, Lin discloses an method for outputting an image data form an active digital image capture device, comprising:

- generating a image data corresponding to an image through image capturing (e.g. to generate raw data 62; see [0017]);

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- processing the image data (e.g. encoding and converting the raw data; see [0018] and [0019]);
- and outputting the processed image data actively to an image forming device without the controlling of the image forming device when the image forming device is coupled to the active digital capture device (e.g. generates the print data 86 without utilizing any external device; see [0020]).

Regarding claim 2, Lin clearly discloses an image capture apparatus further comprising an image data storing unit (i.e. a memory 68) coupled to the processing unit for storing the image data (see [0018]).

Regarding claim 3, Lin clearly discloses an image capture apparatus further comprising an input interface (i.e. a user interface 72) coupled to the processing unit for receiving a command to control the operation of the processing unit (see [0018]).

Regarding claim 4, Lin clearly teaches an image capture apparatus comprising a display module coupled to the processing unit for a user to preview the image data (e.g. enable a user to preview a frame and to select those frames that are to be kept, while discarding unwanted frames (see [0004]).

Regarding claim 6, Lin clearly discloses an image capture apparatus wherein the processing operation performed by the processing unit is to convert the image data into a converted PC image data (i.e. encoded data 66 such as JPEG, GIF, BMP or TIFF) corresponding to the imaging forming device (see [0018]).

Regarding claim 17, Lin clearly discloses a method of claim 16, wherein the image data processing operation is to convert the image data into a converted image

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data corresponding to the image forming device (e.g. convert the raw data 62 into the device-dependent print data 86 according to configuration information 74 of the user interface 72; see [0021]).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 7-8, and 10-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in view of Kato, US 2003/0156196.

Regarding claim 5, Lin discloses an image capture apparatus comprising an image capture unit and a processing unit.

Lin does not explicitly disclose the image capture apparatus comprising an output interface coupled between the processing unit and the imaging forming device for outputting the processed image data to the imaging forming device.

Kato discloses an output interface (i.e. I/F 11) coupled between the processing unit and the imaging forming device for outputting the processed image data to the imaging forming device. (see [0048]).

Lin and Kato are analogous art because they are from the same field of endeavor of digital camera capable of generating print data. At the time of the invention, it would

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have been obvious to a person of the ordinary skill in the art to use Kato's I/F 11 in Lin's digital camera. The suggestion/motivation would have been to exchange the data between the expansion recording medium 10 and an external apparatus and further control reading (see [0048]). Therefore, it would have been obvious to combine Kato with Lin to obtain the invention as specified in claim 5.

Regarding claim 7, Kato discloses an image capture apparatus wherein further comprising a configuration storing unit coupled to the processing unit for storing the format of the imaging forming device (i.e. a frame memory 6; see [0048]).

Regarding claim 8, Kato discloses an image capture apparatus wherein the output interface is an USB interface and the image capture apparatus is an USB host and the imaging forming device is an USB device (see [0041]).

Regarding claim 10, Kato discloses an image capture apparatus wherein the output interface is an IEEE 1394 interface (see [0041]).

Regarding claim 11, Kato discloses an image capture apparatus wherein the output interface is a Bluetooth interface (see [0041]).

Regarding claims 12 and 13, Kato discloses an image capture apparatus wherein the imaging forming device is a personal computer and the PC has a monitor (i.e. PC 3010; see [0051]).

Regarding claim 14, Kato discloses an image capture apparatus is a digital camera (i.e. digital still camera 3012; see [0050]).

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8. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in view of Kato as applied to claims 1, 5, and 8, and further in view of Matsuda, US 6,774,604.

Regarding claim 9, note the discussion of Lin and Kato claims 1, 5, and 8 above. Lin and Kato do not teach the output interface is an USB on-the-go interface. However, Matsuda teaches the output interface is an USB on-the-go interface (see col. 9, lines 1-7). It would have been obvious to one of ordinary skill in the art at the time this invention was made to have used the USB on-the-go devices as taught by Matsuda to the camera system of Lin as modified by Kato so that imparts a simple host function to a device such as a digital camera that does not normally have the host function, enabling direct connection of USB devices without the intercession of a PC (see col. 9, lines 1-7).

9. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Lin in view of Chen, US 2003/0107651.

Regarding claim 15, Lin discloses an image capture apparatus comprising an image capture unit and a processing unit. Lin does not does not explicitly disclose the converted image data includes a printer control language (PCL).

Chen discloses the processing operation performed by the processing unit is to convert the image data into the converted image data includes a printer control language (see [0037]).

Lin and Chen are analogous art because they are from the same field of endeavor of digital camera capable of outputting image data. At the time of the



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invention, it would have been obvious to a person of the ordinary skill in the art to use PCL as touch by Chen in Lin's digital camera. The motivation would have been to accept the BMP format and then is print via the halftone print technology cooperating with the PCL (see [0037]). Therefore, it would have been obvious to combine Chen with Lin to obtain the invention as specified in claim 15.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hammadou (US 6,937,274) disclose a method for dynamic range compression of output channel data from an image sensor comprising an array of sensor cells.
- Sakurai et al. (US 6,684,000) disclose a two-dimensional image sensor has photodiodes receiving light from an object through complementary color filters of CYMK.

### ***Inquiries***


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kent Wang whose telephone number is 571-270-1703. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on 571-272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-270-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kent Wang  
22 March 2007

  
CHANH D. NGUYEN  
SUPERVISORY PATENT EXAMINER